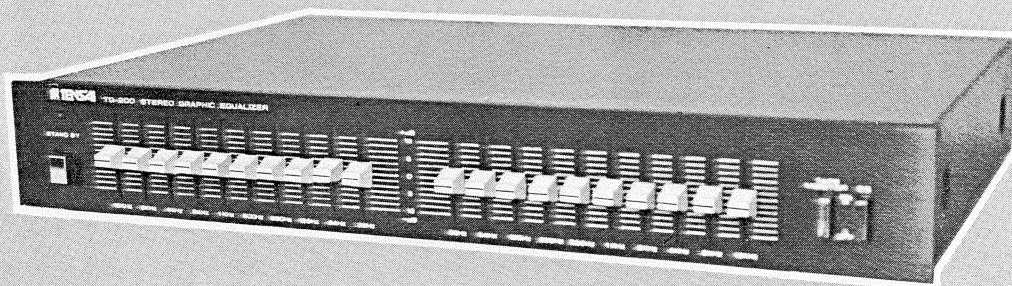


Service Manual

Stereo Graphic Equalizer Amplifier

MODEL TQ-200

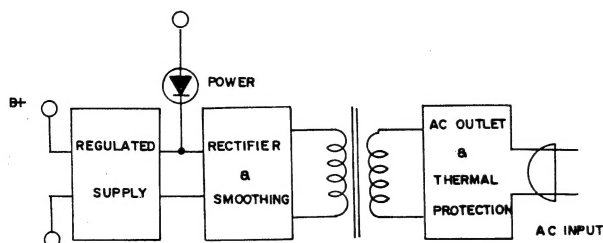
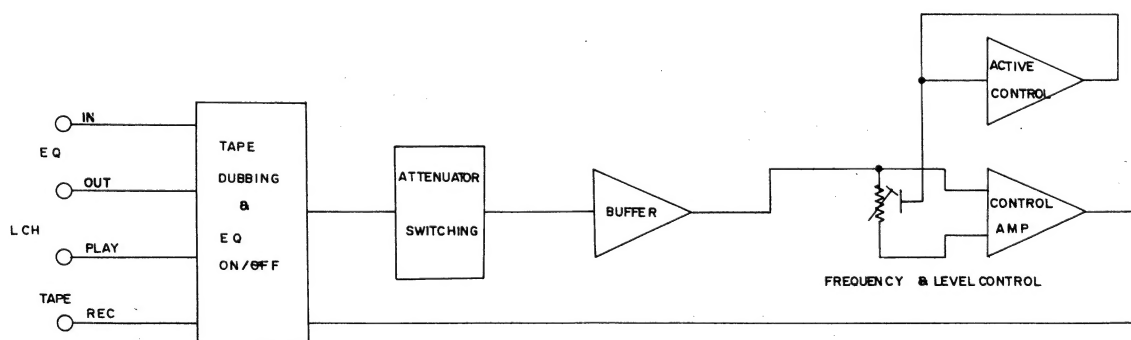
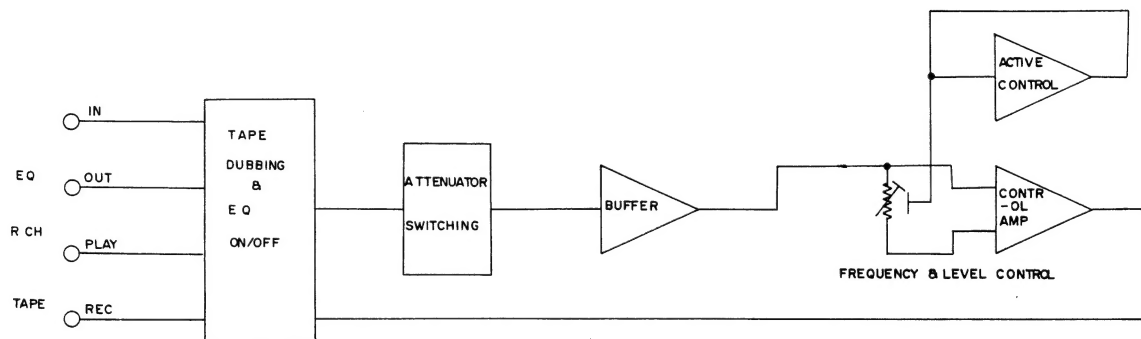


SPECIFICATIONS

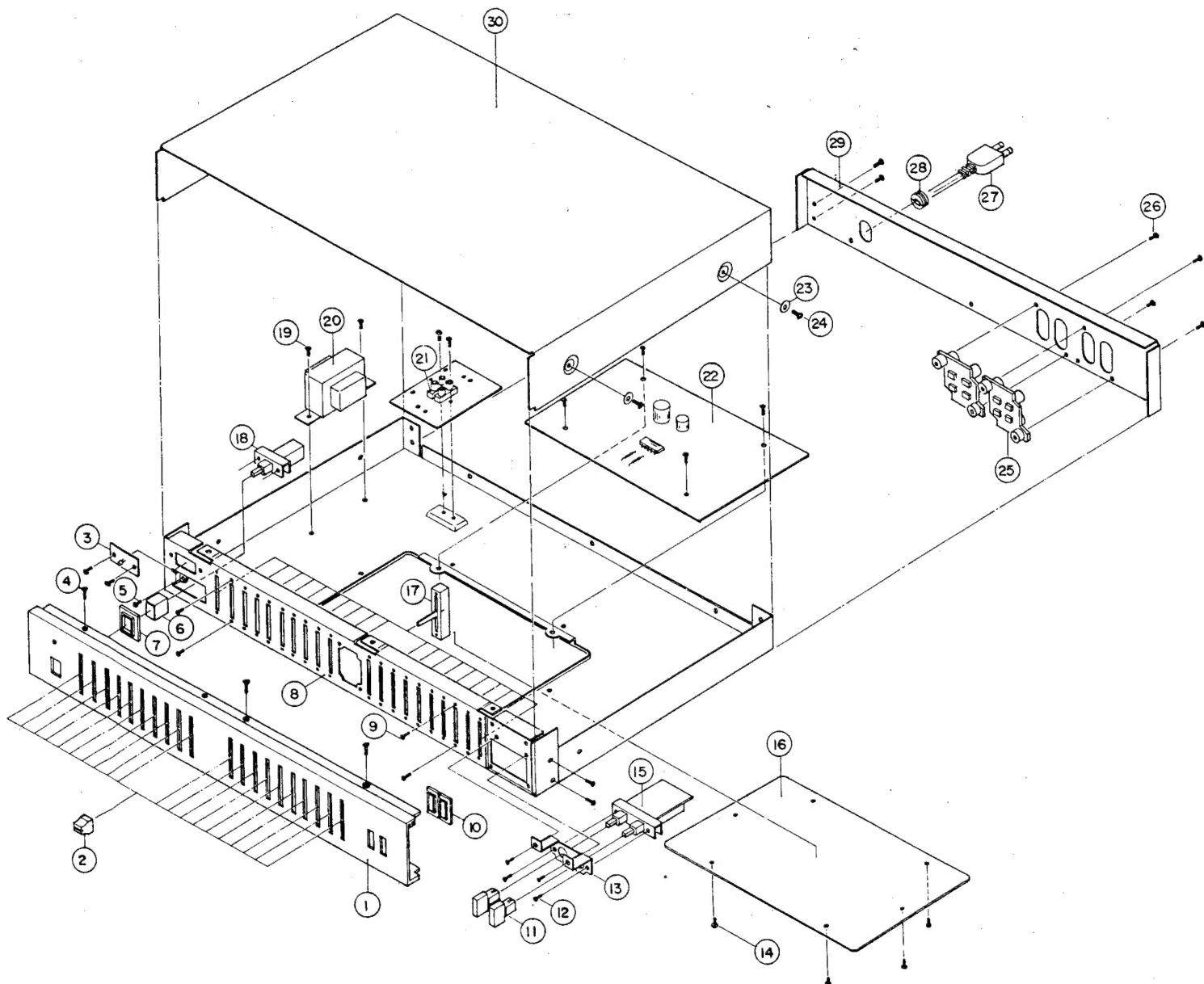
Input Sensitivity	: 1V
Input Impedance	: >47k ohms
Output Impedance	: <1k ohm
Control Range	: $\pm 12\text{dB}$
Control Frequency	: 32 Hz, 64 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz
S/N Ratio	: >100 dB
Frequency Response	: <10 Hz ~ >65 kHz
Distortion	: <0.02%
Power Supply	: 200-240 V ~, 50 Hz
Dimensions (WxHxD)	: 430 x 60 x 284 mm
Weight	: 3.75 kg approx.

— Subject to change without notice. —

BLOCK DIAGRAM



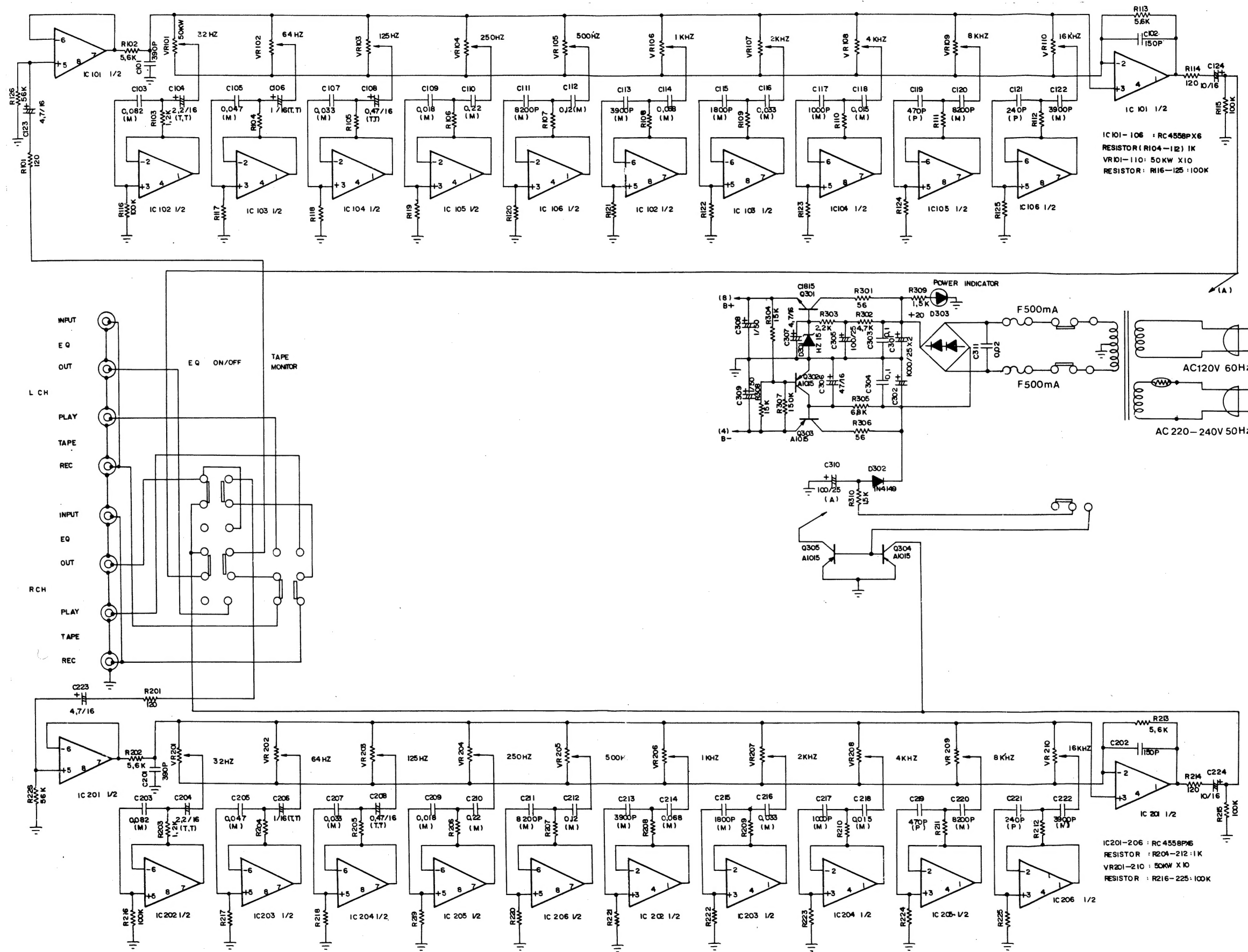
EXPLODED VIEW AND PARTS LISTS



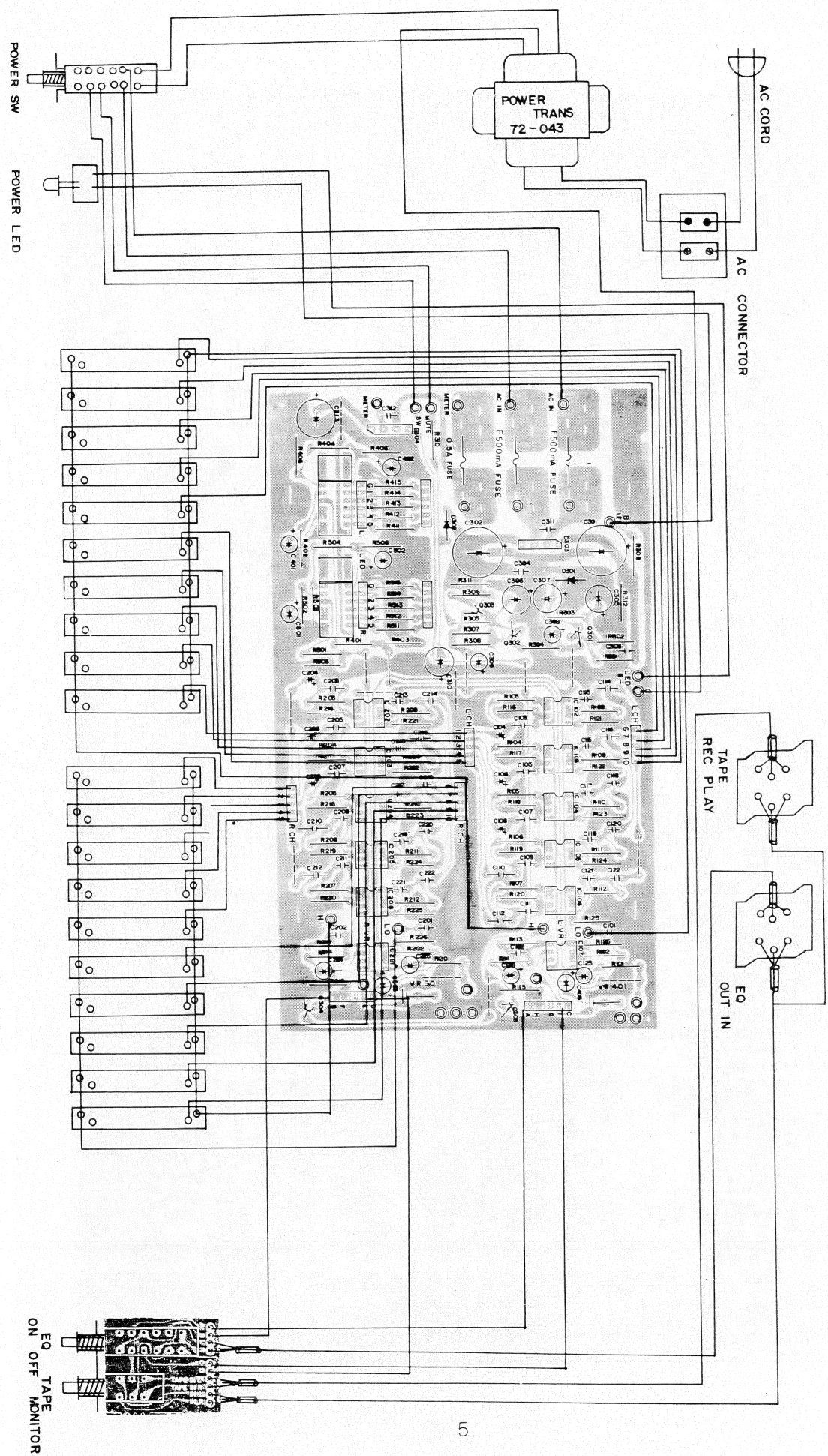
No.	Discription	Q'ty
1	Front Panel	1
2	Slide Knob	20
3	LED P.C Board	1
4	Screw $\phi 3 \times 8$ Tapping Flat H/D	6
5	Screw M3x0.5x6 Machine P/H	2
6	Power Knob	1
7	Power Bezel	1
8	Main Chassis	1
9	Screw M2x0.4x4 Machine P/H	40
10	Push Bezel	2
11	Push Knob	2
12	Screw M3x0.5x6 Machine P/H	2
13	Push Switch Bracket	1
14	Screw $\phi 3 \times 6$ Tapping P/H	
15	Push Switch	2

No.	Description	Q'ty
16	Bottom Cover	1
17	Slide Potention Meter	20
18	Power Switch	1
19	Screw M4x0.7x8 Machine W/Nut	2
20	Power Transformer	1
21	A/C Connector	1
22	Main P.C Board	1
23	Fiber Washer	4
24	Screw M4x0.7x8 Truss H/P Silver	4
25	RCA Jack 4P	2
26	Screw $\phi 3 \times 8$ Tapping P/H Black	11
27	AC Cord	1
28	AC Cord Stopper	1
29	Back Chassis	1
30	Steel Cabinet	1

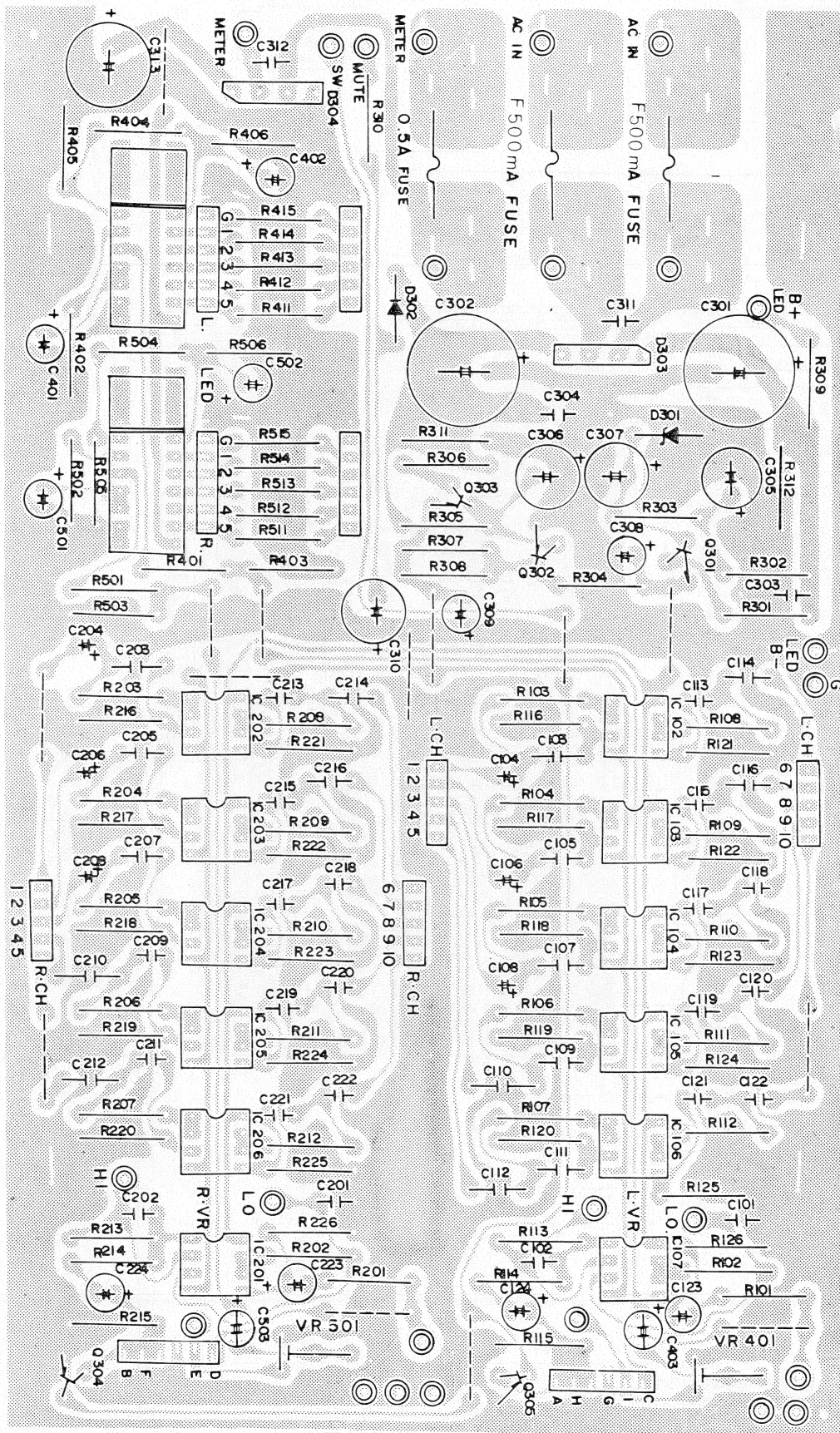
SCHEMATIC DIAGRAM



WIRING DIAGRAM



PCB LAY OUT AND PARTS LISTS



SYMBOL	DESCRIPTION
R101	120 ohm $\pm 5\%$ $\frac{1}{4}W$
R102	5.6K ohm $\pm 5\%$ $\frac{1}{4}W$
R103	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R104	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R105	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R106	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R107	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R108	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R109	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R110	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R111	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R112	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R113	5.6K $\pm 5\%$ $\frac{1}{4}W$
R114	120 $\pm 5\%$ $\frac{1}{4}W$
R115	100K $\pm 5\%$ $\frac{1}{4}W$
R116	100K $\pm 5\%$ $\frac{1}{4}W$
R117	100K $\pm 5\%$ $\frac{1}{4}W$
R118	100K $\pm 5\%$ $\frac{1}{4}W$
R119	100K $\pm 5\%$ $\frac{1}{4}W$
R120	100K $\pm 5\%$ $\frac{1}{4}W$
R121	100K $\pm 5\%$ $\frac{1}{4}W$
R122	100K $\pm 5\%$ $\frac{1}{4}W$
R123	100K $\pm 5\%$ $\frac{1}{4}W$
R124	100K $\pm 5\%$ $\frac{1}{4}W$
R125	100K $\pm 5\%$ $\frac{1}{4}W$
R126	56K $\pm 5\%$ $\frac{1}{4}W$
R201	120 ohm $\pm 5\%$ $\frac{1}{4}W$
R202	5.6K ohm $\pm 5\%$ $\frac{1}{4}W$
R203	1.2K $\pm 5\%$ $\frac{1}{4}W$
R204	1.2K $\pm 5\%$ $\frac{1}{4}W$
R205	1.2K $\pm 5\%$ $\frac{1}{4}W$
R206	1.2K $\pm 5\%$ $\frac{1}{4}W$
R207	1.2K $\pm 5\%$ $\frac{1}{4}W$
R208	1.2K $\pm 5\%$ $\frac{1}{4}W$
R209	1.2K $\pm 5\%$ $\frac{1}{4}W$
R210	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R211	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R212	1.2K ohm $\pm 5\%$ $\frac{1}{4}W$
R213	5.6K $\pm 5\%$ $\frac{1}{4}W$
R214	120 $\pm 5\%$ $\frac{1}{4}W$
R215	100K $\pm 5\%$ $\frac{1}{4}W$
R216	100K $\pm 5\%$ $\frac{1}{4}W$
R217	100K $\pm 5\%$ $\frac{1}{4}W$
R218	100K $\pm 5\%$ $\frac{1}{4}W$
R219	100K $\pm 5\%$ $\frac{1}{4}W$
R220	100K $\pm 5\%$ $\frac{1}{4}W$
R221	100K $\pm 5\%$ $\frac{1}{4}W$
R222	100K $\pm 5\%$ $\frac{1}{4}W$
R223	100K $\pm 5\%$ $\frac{1}{4}W$
R224	100K $\pm 5\%$ $\frac{1}{4}W$
R225	100K $\pm 5\%$ $\frac{1}{4}W$
R226	56K $\pm 5\%$ $\frac{1}{4}W$
R301	56 $\pm 5\%$ $\frac{1}{4}W$
R302	4.7K $\pm 5\%$ $\frac{1}{4}W$
R303	2.2K $\pm 5\%$ $\frac{1}{4}W$
R304	15K $\pm 5\%$ $\frac{1}{4}W$
R305	6.8K $\pm 5\%$ $\frac{1}{4}W$
R306	56 $\pm 5\%$ $\frac{1}{4}W$
R307	150K $\pm 5\%$ $\frac{1}{4}W$
R308	15K $\pm 5\%$ $\frac{1}{4}W$
R309	1.5K $\pm 5\%$ $\frac{1}{4}W$
R310	1.5K $\pm 5\%$ $\frac{1}{4}W$

SYMBOL	DESCRIPTION
C101	390pF
C102	150pF
C103	0.082 μ F/50V (Mylar)
C104	2.2 μ F/16V (Tag Tantalum)
C105	0.047 μ F/50V (M)
C106	1 μ F/16V (T.T)
C107	0.033 μ F/50V (M)
C108	0.47 μ F/16V (T.T)
C109	0.018 μ F/50V (M)
C110	0.22 μ F/50V (M)
C111	8200pF/50V (M)
C112	0.12 μ F/50V (M)
C113	3900pF/50V (M)
C114	0.068 μ F/50V (M)
C115	1800pF/50V (M)
C116	0.033 μ F/50V (M)
C117	1000pF/50V (M)
C118	0.015 μ F/50V (M)
C119	470pF (Polyester)
C120	8200pF/50V (M)
C121	240pF (P)
C122	3900pF/50V (M)
C123	4.7 μ F/16V
C124	10 μ F/16V
C201	390pF
C202	150pF
C203	0.082 μ F/50V (M)
C204	2.2 μ F/16V (T.T)
C205	0.047 μ F/50V (M)
C206	1 μ F/16V (T.T)
C207	0.033 μ F/50V (M)
C208	0.47 μ F/16V (T.T)
C209	0.018 μ F/50V (M)
C210	0.22 μ F/50V (M)
C211	8200pF/50V (M)
C212	0.12 μ F/50V (M)
C213	3900pF/50V (M)
C214	0.068 μ F/50V (M)
C215	1800pF/50V (M)
C216	0.033 μ F/50V (M)
C217	1000pF/50V (M)
C218	0.015 μ F/50V (M)
C219	470pF (P)
C220	8200pF/50V (M)
C221	240pF (P)
C222	3900pF/50V (M)
C223	4.7 μ F/16V
C224	10 μ F/16V
C301	1000 μ F/25V
C302	1000 μ F/25V
C303	0.1 μ F
C304	0.1 μ F
C305	100 μ F/25V
C306	47 μ F/16V
C307	4.7 μ F/16V
C308	1 μ F/50V
C309	1 μ F/50V
C310	100 μ F/25V
C311	0.02 μ F
IC101	RC4558P
IC102	RC4558P

SYMBOL	DESCRIPTION
IC103	RC4558P
IC104	RC4558P
IC105	RC4558P
IC106	RC4558P
IC201	RC4558P
IC202	RC4558P
IC203	RC4558P
IC204	RC4558P
IC205	RC4558P
IC206	RC4558P
D301	Zener Hz15
D302	1N4149
D303	DBA108
Q301	C1815
Q302	A1015
Q303	A1015
Q304	A1015
Q305	A1015
VR101	50KW
VR102	50KW
VR103	50KW
VR104	50KW
VR105	50KW
VR106	50KW
VR107	50KW
VR108	50KW
VR109	50KW
VR110	50KW
VR201	50KW
VR202	50KW
VR203	50KW
VR204	50KW
VR205	50KW
VR206	50KW
VR207	50KW
VR208	50KW
VR209	50KW
VR210	50KW